

## ON SOME NEW AND LITTLE-KNOWN AUSTRALIAN FULGOROIDEA (HOMOPTERA).

BY F. MUIR, HAWAIIAN SUGAR PLANTERS' EXPERIMENT STATION, HONOLULU, T.H.

(Six Text-figures.)

THE following paper deals with part of a small collection forwarded to me by the Queensland Museum. Some Cixiidæ still await identification as the writer is at work on a revision of the genera of that family. Two species in the Hawaiian Sugar Planters' Association Experiment Station collection are included. The types are in the Queensland Museum unless otherwise stated. Measurements are from apex of head to anus, and from base to apex of one tegmen.

### DERBIDÆ.

#### EOCENCHREA HIVA (Kirk).

*Lamenia hiva* Kirkaldy. H.S.P.A. Exp. Stn. Ent. Bull. I. (9), p. 404 (1906).

One male and one female from Brisbane (H. Hacker, 5-2-1922). This was described from a single female. The male is similar in structure and colour. Lateral margins of pygofer subangularly produced, ventral margin straight; anal segment small, anus near apex which is rounded; genital styles wide, flat, outer margin slightly concave in outline, inner margin slightly convex, apex but slightly narrower than base, subtruncate.

#### EOCENCHREA PULLA sp. n.

*Male*.—Length 1·4 mm.; tegmen. 3·2 mm.

In build this species is similar to *E. hiva*. In colour it is all black or very dark brown, with the legs slightly lighter. At the node there is a faintly light spot. Lateral margins of pygofer angularly produced, ventral margin straight; anal segment small, about as long as broad, anus at apex; genital styles broadest at base, gradually narrowing to apex which is rounded.

Described from one male from Hornsby, N.S.W. (F. Muir, January, 1920). Type in Hawaiian Sugar Planters' Association Experiment Station collection, No. 1102.

#### PHANTASMATOCERA PULCHELLA sp. n.

(Text-figure 1.)

*Male*.—Length, 2·7 mm.; tegmen 4·2 mm.

Vertex about as long as broad, lateral margins thick and produced at apex, base and apex roundly emarginate; face widest at base, in profile base

considerably produced; antennæ not as long as face, very slightly flattened. Lateral margins of pygofer roundly produced, ventral margin straight; anal segment in dorsal view longer than wide, base slightly wider than apex, anus at apex, apical margin with a small emargination in middle; genital style figured.

Light yellow with white waxy secretion, antennæ and a line in front of eyes black or fuscous, the line continued behind eyes over sides of pronotum and mesonotum; fuscous over abdominal tergites. Tegmina hyaline, white with waxy secretion, fuscous over middle of clavus, Cu and basal median sector into apical Cu M. cells, a black spot on cross vein at apex of M, veins same colour as membrane or slightly yellow; wings hyaline with light veins, opaque with waxy secretion.

*Female* similar to male but the antennæ are terete and in profile, the base of face not projecting so much. Hind margin of seventh abdominal tergite roundly produced in middle, with a minute emargination in middle.

Described from two males and two females from National Park, Queensland (*H. Hacker*, December, 1921). Type in Queensland Museum, No. 2752.

*P. pseudopalidocornis* was described from one female and the genitalia is very close to *pulchella*, but the colour of tegmina is different.



Text-figure 1.—*PHANTASMATOCERA PULCHELLA* ; left genital style.



Text-figure 2.—*HERONAX DUBIUS*.

(a) Lateral view of ♂ genitalia ;  
(b) ventral view of ♀ pregenital plate (7th sternite).

#### KAMANDAKA LONGMANI sp. n.

*Kamandaka* Distant. Faun. Brit. Ind. Rhyn. III, p. 310 (1906).

*Eosaccharissa* Kirkaldy, Brux. Ann. Soc. Ent. p. 127 (1907). Subgenus of *Kamandaka*.

*Chaprina* Distant = *Eosaccharissa* Kirk.

*Tapoosa* Distant = *Eosaccharissa* Kirk.

*Nicertoides* Matsumura Die Schadl. und Nutzl. insekten v. Zuckerrohr Formosa, p. 14 (1910). Subgenus of *Kamandaka* Dist.

Elsewhere<sup>1</sup> I have tried to define the limits of the three subgenera which I place under *Kamandaka*. The present species falls into *Eosaccharissa* which has the face in profile strongly curved on apical half.

*Female*.—Length 3·4 mm.; tegmen 6·5 mm.

<sup>1</sup> Ent. Mo. Mag. iv, (3), Oct., 1918, p. 240.

Stramineous; a dark mark on gena in front of eyes and behind eyes on pronotum, fuscous along the lateral margins of vertex, on front femora and over abdominal tergites. Hind margin of pregenital plate (seventh sternite) angularly produced from near the lateral corners to middle, the sides of the production slightly curved. Anal segment longer than wide, anus in middle, apex round.

Described from one female from National Park, Queensland, 3,000 feet elevation (*H. Hacker*, December, 1921). Type in Queensland Museum, No. 2753.

**HERONAX DUBIJS** sp. n.

(Text-figure 2.)

*Male*.—Length 2·8 mm.; tegmen 6·4 mm.

A very small subantennal process, but no trace of shoulder keel; antennæ shorter than face, wide and considerably flattened. Forking of claval veins about one fourth from apex.

Light brown or yellow; middle of clypeus darker brown; abdominal tergites fuscous over the medio-lateral portion; pygofer dark, anal segment and styles light; front and middle tibiæ with a small dark band in middle and another at apex. Tegmina hyaline with reddish brown markings; a V-shape mark from apex of clavus to fork of Cu to base of M where it continues along R cell to apex, and across to apex of Cu 1 with four round hyaline spots in the middle; dark over apical cells where there is a darker spot over median apical veins; five or six small dark marks in costal cell; veins dark in dark areas, and yellowish in light areas. Wings hyaline, slightly fuscous, veins fuscous, the Cu darker than the others.

Pygofer very short on sides, longer ventrally, ventral margin simple, lateral margins angularly produced on dorsal half; anal segment long, anus one-third from apex in dorsal view; sides very slightly converging to anus, then more strongly so, apex bifurcate and turned ventrad. Genital style broad at apex which is subtruncate, narrow at base, outer margin slightly sinuous, with apical corner produced into a spine, inner apical corner rounded, inner margin nearly straight to near base where it is produced into a small, pointed process curved inward, a small process on the inner surface near base. Aedeagus not dissected out.

*Female*.—Length 3·2 mm.; tegmen 7 mm.

Similar to male but darker in colour; the apical third of tegmen dark with three light spots along the media.

Pregenital plate 5-sided, base about half the width of apex, straight, apex angular, sides very slightly sinuous, concave in middle.

Described from one male and one female from National Park, Queensland, 3,000 feet elevation (*H. Hacker*, December, 1921). Type and allotype in Queensland Museum, No. 2754.

The type material of *H. parnassius* Kirk. consists of a single specimen without an abdomen. Although it is considerably lighter in colour than *H. dubius*, yet there is a possibility of their being the same. Males from Cairns; the type locality of *H. parnassius* will decide the question.

The two genera, *Mysidioides* Mats. and *Heronax* Kirk, run near together. In the former there are distinct shoulder keels and subantennal plate, whereas in the latter they are wanting, or only one is present in a very rudimentary form.

#### ACHILIDAE.

##### **TROPIPHLEPSIA** gen. nov.

A very small costal area at the base of tegmen; apex of clavus in middle; Sc + R basad of apex of clavus, M joined to Sc + R forming a common stalk at base, Mf level with node, M 1 and 2 forking considerably basad of apical cross veins, M 3 and 4 forking near to cross veins, M 3 + 4 joining Cu 1 for short distance, Cu f slightly basad of apex of clavus, Cu 1 curved out to meet M 3 + 4: clavus roundly closed, claval vein entering apex of clavus, the second claval vein sinuous and raised into two keels, the large basad of fork the smaller distad of fork. There is also a very slight keel on Cu 1A, Cu stem, M and Sc + R.

Width of vertex at apex four times the length in middle, apex truncate, base slightly and roundly emarginate, apex slightly narrower than base, margins carinate, a median longitudinal carina. Base of frons slightly broader than apex, sides slightly arcuate, carinate continuing on to clypeus, median carina on frons and clypeus obscure, clypeus short. Antennae small, globose. Pronotum short, anterior margin fitting into base of vertex, posterior margin widely angularly emarginate, a median carina; mesonotum a little wider than long, tricarinate. Legs short, front, and middle femora slightly flattened.

This genus can be recognized by the condition of the second claval vein.

##### **TROPIPHLEPSIA BADIA** sp. n.

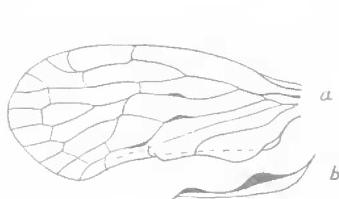
(Text-figure 3.)

*Female*.—Length 3.5 mm.; tegmen 5.7 mm.

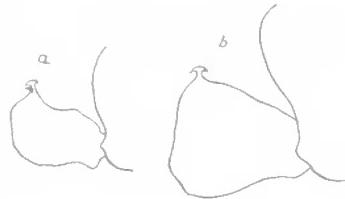
Vertex and nota dark brown speckled with small light spots; frons much lighter speckled with lighter spots; legs and pleura dark brown with lighter spots; abdomen dark brown with the hind margins of tergites light. Tegmina brown, darker over clavus, across the middle, through the subapical cells and at apex, veins dark with light specks along them also extending into the costal and apical cells. Wings light fuscous with darker veins.

Pregenital sternite (seventh) with posterior margin deeply angularly emarginate; ovipositor incomplete, sheaths not completely covering ovipositor; anal segment small.

Described from one female from Brisbane (*H. Hacker*, October, 1917). Type in Queensland Museum, No. 2755.



Text-figure 3.—*TROPIPHLEPSIA BADIA*. (a) Left tegmen; (b) showing raised claval vein.



Text-figure 4.—RIGHT GENITAL STYLE. (a) *GAEFULIA CHRYSOIDES*; (b) *G. KOERELEI*.

## RICANIIDÆ.

### *GAEFULIA HACKERI* sp. n.

*Female*.—Length, 6.5 mm.; tegmen 8.4 mm.

Vertex distinctly longer than wide, apex narrower than base and angular, base angularly emarginate, sides carinate, disc excavate; frons considerably longer than wide, base narrower than apex, widest slightly before apex, sides straight to near apex then curved, carinate, a strong median carina; clypeus with a median carina, no lateral carinæ. Antennæ small, globose. Pronotum short, hind margin widely angularly emarginate, anterior margin produced into angular emargination of vertex, lateral carinæ large, diverging, not reaching hind margin, median carina obscure; mesonotum slightly longer than wide. Middle of mesonotum broken by pin so carinæ cannot be observed. Venation of tegmen normal, Sc + Rf very slightly basad of Mf and Cu f, apical cross veins of M contiguous, forming a line, those of Sc and R irregular. Costal membrane with ten cross veins. The apex of costal cell not forming a small knob as in *G. chrysoides* (Walk.).

Apex of abdomen rounded; anal segment small; ovipositor incomplete, sheaths wide, rounded, together forming a hemisphere covering the ovipositor.

Three black, longitudinal lines on frons, one over median carina which extends on to clypeus and the other two between carinæ; lateral carinæ, genæ, and sides of clypeus stramineous; middle of vertex fuscous, carinæ stramineous, nota stramineous with fuscous markings forming longitudinal lines on mesonotum. Abdomen dark stramineous or light brown, lighter on the outer portions of tergites and on hind margins, first visible sternite (true third) light yellow,

others fuscous yellow. Tegmina clear hyaline, veins dark brown, costal vein and basal cell lighter, a small dark brown spot at apex of costal cell; wings clear hyaline, veins dark brown, a fuscous mark on apical portion of anal area.

Described from one female from Russell Island, Queensland (*H. Hacker*, 2-12-1921). Type in Queensland Museum, No. 2756.

This species appears to be more typical of the genus than *G. chrysopoides* (Walk.).

**GAETULIA KOEBELEI** sp. n.

(Text-figure 4.)

*Male*.—Length, 5·3 mm.; tegmen 7·3 mm.

Width of vertex about twice the length in middle, apex slightly angularly produced, base widely angularly emarginate, a very faint carina down middle. Width of frons subequal to length in middle, base subequal to apex in width, slightly widest slightly before apex, sides straight to near apex then slightly curved, median longitudinal carina distinct; clypeus with median carina but no lateral carinæ. Pronotum short, anterior margin produced into base of vertex, posterior margin widely angularly emarginate. Mesonotum with three carinæ. Costal area with fourteen cross veins; apex of costal cell slightly enlarged. Sc + Rf and Cuf about level, Mf slightly more distad, apical cross veins gradate, not forming a continuous line.

Light brown, the carinæ of head and thorax lighter. Tegmina hyaline, clear, veins dark brown, a light brown spot at apex of costal cell and another at apex of anal area of wings which are otherwise clear hyaline with brown veins.

The genitalia is very near to *G. chrysopoides* (Walk.), but the genital styles are larger, wider, and have the outer margins straight; the outer apical angle is produced into a bifurcate process like a pick.

Described from one male from Mittagong, N.S.W. (*A. Koebelei*, January, 1905). Type in Hawaiian Sugar Planters' Association Experiment Station collection, No. 1101. This species differs in colour, size, and genitalia from *G. chrysopoides* (Walk.). From *G. nigrovenosa* Melichar it differs in the wider vertex and frons, in having no small hairs on the frons, in the shape of the apex of costal cell and the genital styles.

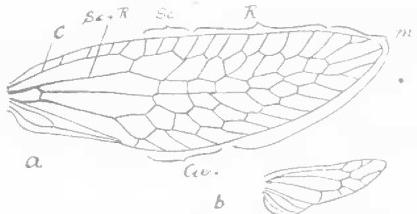
Distant erected the genus *Nurunderia* for *chrysopoides* Walk. on account of a small difference in the shape and size of head, especially the face, but cannot recognise them as of generic importance.

**PARALASONIA** gen. nov.

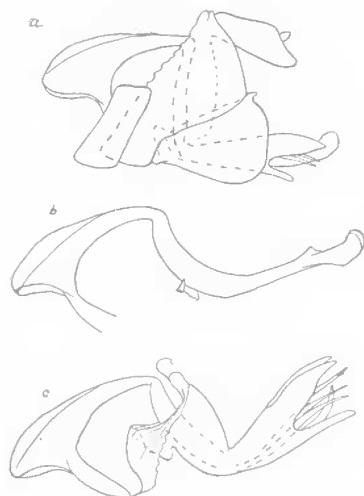
Tegmina narrow, pointed at apex. Costal area short and narrow with three or four cross veins; Sc + R joined to apex of costal membrane, level with apex of clavus, Mf slightly more distad and Cu f slightly more basad; from the costal area to apex of clavus there is a row of apical cells subequal in length. Wings small, one-third the length of tegmen.

Head as broad as, or slightly broader than, the thorax; vertex subquadrate, apex slightly broader than base, slightly rounded with the tumid frons projecting, base slightly excavate, sides straight with slight carinæ, middle without carina. Frons shorter than wide, especially on the middle line, frontoclypeal suture arcuate, somewhat obscure, sides of frons subparallel to near apex, where they converge slightly, the middle of the frons tumid; clypeus without carinæ. Pronotum short, hind margin widely angularly emarginate, tricarinate, the lateral carinæ curved, not reaching hind margin. Mesonotum broader than long, obscurely tricarinate. Hind tarsi short, basitarsus wide, swollen. Antennæ small, first segment very short, second segment about as long as wide.

This genus comes next to *Lasonia* Melichar. Both of them come near *Gaetulia* Stål. The division of the family into groups on the proportional length and breadth of the frons is unnatural. I believe that a classification based on the venation and checked by a study of the male genitalia will give better results.



Text-figure 5.—*PARALASONIA AUSTRALIS*.  
(a) Right tegmen; (b) right wing;  
(c) costa; m, media; Cu, cubitus;  
Sc + R, subcosta and radius joined.



Text-figure 6.—*PARALASONIA AUSTRALIS*. (a) Lateral view of ♂ genitalia; (b) lateral view of aedeagus without penis; (c) lateral view of penis.

**PARALASONIA AUSTRALIS** sp. n.

(Text-figures 5 and 6.)

*Male*.—Length 4·7 mm.; tegmen 7 mm.

Ochraceous, perhaps when living green or greenish yellow; vertex with a longitudinal median black mark, the apical margin black, curving inward at the margins; frons with a small black mark in middle and a few at the sides, clypeus with four or five fuscous marks on each side; fuscous over carinae of nota; a small dark spot in the middle of the posterior margin of the abdominal terga. Tegmina and wings clear hyaline, veins black except the claval suture; base of claval veins and basal cell which are colourless or light yellow.

Pygofer laterally compressed, lateral margin subangularly produced; anal segment small, anus at apex; genital styles large, subtriangular, the outer apical corner produced into a small, curved spine, the inner apical corner rounded. Aedeagus complex. The periandrium forming a funnel. The ventral margin of the apex produced into a membranous process, dorsal margin into two large processes, broad at base but pointed at apex, from within the funnel arises two pair of processes, on the left they are both long, slender, straight spines, but on the right one is straight and slender, the other is broader at base and curved; the penis arises in the middle and is a curved, slender tube rounded at apex where it is cleft for a short distance, with a little spine on dorsal surface near apex.

Described from one male from National Park, Queensland (*H. Hacker*, December, 1921). Type in Queensland Museum, No. 2757.